

### **REMARKS/ARGUMENTS**

The Applicants originally submitted Claims 1-20 in the application. Previously, the Applicants amended Claims 1, 8 and 15. In the present response, the Applicants have not amended, canceled or added any claims. Accordingly, Claims 1-20 are currently pending in the application.

#### **I. Rejection of Claims 1, 4-6 and 8-13 under 35 U.S.C. §103**

The Examiner has rejected Claims 1, 4-6 and 8-13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,141,390 to Cova in view of U.S. Patent No. 6,275,685 to Wessel, *et al.*, and in further view of U.S. Patent No. 6,054,896 to Wright, *et al.* The Applicants respectfully disagree.

The Examiner recognizes that Cova does not teach or suggest a WCDMA transceiver or a WCDMA transceiver having an antenna wherein the antenna is disconnected from the transmit chain during a training mode as recited in independent Claims 1 and 8. To cure these deficiencies, the Examiner cites Wessel and Wright. (*See Examiner's Action*, pages 3 and 6.) The Examiner also recognizes that Cova is directed to a transmitter but asserts that Figure 4 of Cova discloses a transceiver including a transmitter and a receiver. (*See Examiner's Action*, pages 2-3.)

Cova, however, provides no teaching or suggestion that Figure 4 discloses a transmitter and a receiver. On the contrary, Cova discloses that Figure 4 is a block diagram of a transmitter using a predistortion system employing a feedback loop. (*See column 3, lines 58-60, column 4, lines 34-36 and 50-54, and Figure 4.*) The feedback loop is not a receiver but instead provides the signal that was actually transmitted by the transmitter 400 to the trainer 431 for the predistorter 407. (*See column 6, lines 64-66 and Figure 4.*) Instead of a receive train of a transceiver, Figure 4 specifically

discloses a dedicated feedback loop of the transmitter 400 that receives output signals from the power amplifier and performs the appropriate down conversions thereon and provides the converted output signal to the trainer 431. (*See* column 4, lines 50-54; column 9, lines 49-52; column 18, line 62 to column 19, line 40 for another embodiment of a dedicated feedback loop; and Figures 4, 6 and 15.)

As discussed in the present specification, a dedicated feedback loop can be used to track changes in a power amplifier but this adds to the overall complexity of a predistortion system. (*See* specification, paragraph 26, page 11.) Unlike the dedicated feedback loop of Cova, the presently claimed invention advantageously employs a receive train of a transceiver. Cova does not even address receivers but relates to linear transmitters using predistortion. (*See* column 1, lines 19-20.) Accordingly, Cova also does not teach or suggest employing a receive train as recited in independent Claims 1 and 8.

Neither Wessel nor Wright cure this deficiency of Cova. Wessel discloses a circuit for predistorting a signal. (*See* Wessel, column 2, lines 24-27 and Figure 4.) As in Cova, however, the predistortion circuit is a feedback circuit of a transmitter. (*See* Wessel, Abstract and Figures 4 and 7.) Wessel makes no teaching or suggestion that the predistortion circuit is a receive chain of a transceiver. Wright also does not cure this deficiency of Cova but is directed to power amplifiers preferably incorporated within a transmitter. (*See* Wright, column 1, lines 17-19 and column 7, lines 37-41.) Therefore, neither Cova, Wessel nor Wright, individually or in combination, teach or suggest employing a receive chain of a WCDMA transceiver as recited in independent Claims 1 and 8.

Thus, the cited combination fails to teach or suggest each element of independent Claims 1 and 8 and fails to provide a *prima facie* case of obviousness of Claims 1 and 8 and Claims dependent thereon. Accordingly, the Applicants respectfully request the Examiner to withdraw the §103(a) rejection of Claims 1, 4-6 and 8-13 and allow issuance thereof.

Furthermore, the Examiner also recognizes that neither Cova nor Wessel teach or suggest an antenna is disconnected from a transmit chain during a training mode. To cure this deficiency, the Examiner cites Wright and asserts that it would have been obvious for one skilled in the art to combine the teachings of Wright with Cova. (See Examiner's Action, pages 6-7.) Cova, however, is directed to a trainer that monitors the actual data or voice signals being transmitted to implement in a predistortion scheme such that normal data or voice transmissions need not be interrupted. (See column 7, lines 8-14.) Wright, on the other hand, discloses various techniques for stimulating analog amplification chains and training compensation circuits when a signal is not being transmitted. (See column 4, lines 57-59.) Thus, one skilled in the art would not be motivated to combine the teaching of Wright with the teachings of Cova since Cova teaches a trainer that operates when signals are **being transmitted** and Wright teaches training compensation circuits that operate when a signal is **not being transmitted**. Wright, therefore, is improperly combined with Cova.

## **II. Rejection of Claims 2, 3, 7 and 14 under 35 U.S.C. §103**

The Examiner rejected Claims 2, 3, 7 and 14 under 35 U.S.C. §103(a) as being unpatentable over Cova and Wessel and in further view of either U.S. Patent No. 6,373,902 to Park, *et al.* (Claim 2), U.S. Patent No. 6,240,144 to Ha (Claim 3) or U.S. Patent No. 6,288,610 to Miyashita (Claims 7 and 14). The Applicants respectfully disagree.

The Applicants do not find where Park, Ha or Miyashita teach or suggest employing a receive chain of a WCDMA transceiver during a training mode to provide a digital compensation signal that is a function of an output of a transmit chain of the transceiver wherein the transceiver's antenna is disconnected from the transmit chain during the training mode as recited in independent Claims 1 and 8. Furthermore, neither Park, Ha nor Miyashita has been cited to cure the above deficiency of Cova and Wessel but to teach the subject matter of the above designated dependent Claims 2-3, 7 and 14. Accordingly, the cited combinations of Cova, Wessel, Park, Ha and Miyashita fail to teach or suggest each element of independent Claims 1 and 8, and do not provide a *prima facie* case of obviousness of Claims 2-3, 7 and 14 which depend thereon. The Applicants, therefore, respectfully request the Examiner to withdraw the §103(a) rejection of Claims 2-3, 7 and 14 and allow issuance thereof.

### **III. Rejection of Claims 15-20 under 35 U.S.C. §103**

The Examiner rejected Claims 15-20 under 35 U.S.C. §103(a) as being unpatentable over Cova and Wessel in further view of Park, Ha and Wright. The Applicants respectfully disagree.

As discussed above regarding independent Claims 1 and 8, the Applicants do not find in Cova, Wessel, Park, Ha or Wright, a teaching or suggestion of employing a receive chain of a WCDMA transceiver during a training mode to provide a digital compensation signal that is a function of an output of a transmit chain of the transceiver wherein the transceiver's antenna is disconnected from the transmit chain during the training mode as also recited in independent Claim 15. Accordingly, the cited combination of Cova, Wessel, Park, Ha and Wright fails to teach or suggest each element of independent Claim 15, and does not provide a *prima facie* case of

obviousness of Claim 15 and Claims 16-20 that depend thereon. Additionally, the cited combination of Wright with Cova is improper. The Applicants, therefore, respectfully request the Examiner to withdraw the §103(a) rejection of Claims 15-20 and allow issuance thereof.


#### IV. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-20.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

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Dated: 3/9/06

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